

RECRUITMENT: Let's start at the very beginning of your participation in the ABM debate.

1. How did you become active in the debate?
2. Who recruited you (to write the article, testify, etc.)?
3. What was your motivation for involvement in the ABM controversy?
4. How effective did you think you would be, i.e., what were your expectations of success?
5. Did you recruit any other scientists to enter the fray?

1,3

I was writing regularly on "Science and Man" for the Washington Post. I was somewhat disappointed in Humphrey's ambiguous associations with Johnson's Vietnam policy; I was looking for issues that might help discover, and fix, distinctions between his and LBJ's approaches to military policy. I thought the ABM debate, as of 1968, was a crucial test; and one furthermore that would 'make a difference' as between Humphrey and Nixon. I did not want to see another missile-gap myth like the 60 campaign's, end up in a new distortion of our own force calculations. See my 6-22-68 article and thereafter.

2. No one.

4-5. Foresaw an outside chance that force strategies might be effectively debated during the campaign. I asked Jerry Wiesner (as a scientists' committee for HHH) to advocate this to Humphrey, which he did, with indifferent success.

TOTAL ACTIVITY ENGAGED IN REGARDING ABM

1. What were all the things you did to oppose or support deployment of ABM?
2. How much time and energy do you estimate you expended?
3. Have you spent similar amounts on other issues?
4. If so, which, when?

1 Some financial contributions; Council for Livable ~~World~~ World. A few personal letters to senators. Odd talks on campus. Incidental references in other articles.

2 Not a great deal. A man-week perhaps.

3-4 Much more, e.g. on biological warfare 1966-71.

But my style is not energetic political activism. I am analytically involved in a wide variety of issues.

1. How would you estimate the division of the scientific community on ABM?
 90% opposed; 10% for deployment
 75 25
 50 50
 25 75
 10 90
2. ^{How} Would you differentiate among academic, industrial and government scientists? Between those knowledgeable about ABM and not?
3. To what do you attribute the differences between pro and anti ABM scientists?
4. Overall, do you think the extent and intensity of the scientists' participation in the ABM debate has been beneficial or detrimental to the scientific community?
5. Has there been any retribution whether to a scientist individually or to the community as a result of the ABM debate?

1 90% opposed.

2. acad>govt>industrial opposed. More knowledgeable about ABM more likely to favor it (as a technological tour de force). Those who understand the economics and politics of action-reaction, or who look more closely into the specific missions for which different designs are planned (like Panofsky) have opposed it.

Willingness to accept and plan for a world of mutual hostagery is the central issue. Many people find this psychologically intolerable. How can we trust the rationality of any enemy? Level of confidence in American institutions is another factor; some anti-ABMers are merely foolhardy (about values they have limited faith in) and would take strong risks in unilateral disarmament, or do anything to defang the DOD.

Some pro-ABMers accept the cogency of technical argument against the present plans, but believe that technology can ultimately solve any problem.

- 4 Overall about neutral. Pro: some heightened sensitivity and sense of efficacy about role in political decision;; Con: a lot of commitment by people who had not thought very deeply about it and took a great deal by rote, on faith.

- 5 Retribution? a strong word. Perhaps might be applied to Long/Hammord cases; but it is not unreasonable that the President have the confidence of his principal advisers. Remarkable little recrimination against individuals as far as I am aware. Doubtless helped to polarize a majority in Congress against scientists' meddling, and in turn against science (esp. NSF funding). I would not put great weight on this.

EFFECTS OF PARTICIPATION: POLITICAL

1. Has your participation altered your political views in any way?

2. Would you say your experience in the ABM debate has made you more or less likely to participate in future scientific or technological issues with political implications?

3. What are they likely to be?

1-2 shoe's on the other foot. Dabbling in ABM was byproduct of my other commitments to public communication on scientific matters,

3 impact of scientific advances (esp. biology): domestication of science.

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PREVIOUS POLITICAL ACTIVITY:

1. Did you engage in any partisan political activity prior to the ABM debate? If so, what, campaigning for candidate? Financial contributions? Writing letters on behalf of someone?

2. Were you previously active in such scientific organizations concerned with public issues such as the Fed. of Amer. Scientists?

1. some of all, in dependent of ABM issue

2 somewhat

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1. Is there a problem in separating R&D from procurement and deployment?

2. Do scientists fall in love with things they develop?

3. Is there anything in US policy or attitudes that makes likely the use of existing technology, ie. is there a technological imperative?

4. Do you think ABM is technically feasible? *very hard, difficult, expensive, difficult to maintain*

5. If you did think it would do what it's supposed to do, would you favor its deployment, why?

1. I'm not sure I understand. I think technology can be developed and then prudently be contained. But lead time problems complicate this for balance of forces in international competition. I.E. If the USSR had developed an ABM we are constrained to do much the same, even short of deployment.

2. Yes. But other scientists (and politicians) can enlarge their wisdom.

3. You mean Ellul's law? I think he has cart before the engine. No. (see p188 attach.)

4. Panofsky assures me not for its present missions. Undoubtedly it could eventually be developed for site-defense. Useless for damage-limitation a/c Soviet reaction capability.

5. Upset the strategic balance. (see 220 attached).

1. To what do you attribute the change in votes and apparent interest in the ABM between '69 & '70?
 2. Have you any knowledge or thoughts about how and why the anti-Chinese rationale was dropped by the Sen. Armed Services Committee this year?
1. Strengthening of anti-war movement generally (should be irrelevant!).
 - 2 Confuses the "SALT bargaining chip argument ". Hard to defend ~~xxx~~ residual ABM (national comm and center) that way (or any other!).

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VIEWS OF OPPONENTS:

1. How well informed do you think your scientific opponents were?
2. Which one of your opponents do you really feel knew what he was talking about? Wohlstetter, e.g.
3. Do you think access to classified information was important in the debate?

1-2 Issue did not really center on technical evaluation (though I share doubts about problems like realibility of the computervprogramming sans operational tests.)

I did not ~~enter~~ enter into any direct debate with scientific opponents. I have read a fair bit of the Congressional testimony, however.

3 Yes, for the technical evaluations. I had to grant every debatable point for lack of such access. Therefore I relied, indirectly, to a very large extent on the statements of Panofsky and Drell; and to a lesser extent, Wiesner, York and others for the appropriate coloration of response on that score.

All these granted, ~~there~~ there remained the political evaluation (in terms of deterrence theory), and the face-value of professed arguments like the bargaining chip.

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NOW LET'S TALK ABOUT ALL THE PEOPLE YOU CONTACTED REGARDING THE ABM:

COMMUNITY LEADERS, COMMUNITY GROUPS

1. Did you make any effort to engage the community in discussing this issue?
2. If yes, how did you go about it?

In muted fashion, Stanford students.

Letters to editor; few talks.

CONTACTS WITH CONGRESSMEN AND SENATORS

1. With which senators and congressmen did you have any contact concerning the ABH?
2. Who initiated it?
3. How many times did you see or write to each one?
4. Which AA's or LA's did you see or contact?
5. Who initiated these contacts?
6. Which legislators or their assistants do you think you influenced?

1, Harris, Mondale, Tunney.

2 I wrote.

3 1 of 2.

4-6 0 or ?

However, my Post column is read widely in Washington, and is my principal means of reaching Congress.

CONTACTS WITH THE DEFENSE TECHNICAL COMMUNITY WITHIN THE EXECUTIVE BRANCH (ARPA, DOD, ACDA, ~~IDA~~, ETC.)

1. Whom did you communicate with?
2. Who initiated the contacts?
3. Whom do you feel you influenced?
4. Who do you feel influenced your thinking?

*none
(except Post)
probably not important.*

*Small debate at
Stamps with
est Secy Nutter*

CONTACTS WITH THE DEFENSE TECHNICAL COMMUNITY OUTSIDE THE
GOVT: INDUSTRIAL & NON-PROFITS

1. Whom did you communicate with?
2. Who initiated the contacts?
3. Whom do you feel you influenced?
4. Who do you feel influenced your thinking?

none

MASS MEDIA:

1. TV? Radio?
2. When, how, who arranged?
3. How effective?
4. Feedback from listeners or readers?

not much

column in Post

CONTACTS WITH SOCIAL SCIENTISTS

1. Did you communicate with or make use of any social scientists during your participation?
2. Normative: What is your view of the role played by the social scientists in the debate?

no.

As you mean Wohlschlag?

On par with other
Scientists.

TECHNICAL AND PROFESSIONAL MEETINGS

1. If engaged in public debate, how recruited?
2. What think of politicization of professional organizations? * Reservations!

* This was not a very good issue

NOW LET'S MOVE TO MORE GENERAL AREAS AND TALK ABOUT THE ROLE OF
SCIENTISTS AS ADVISORS:

1. In general, do you think scientists are used to legitimate decisions based on political considerations, or do you think they really influenced governmental thinking on the ABM?
2. Could you give me any examples to bear out what you just said?
3. What is your explanation of the Sept '67 decision to deploy?
Do you think any scientists were consulted on that decision?
If so, who?
4. What is your explanation of the March '69 Safeguard decision?
Do you think any scientists were consulted on that decision?
If so, who?

1. of course they did. But other ^{and political} policy considerations were given higher weight.

2. I do not know re ABM. Many scientists involved daily in consultative roles.

3. The Hansen gave in to very strong political pressure, ^{frankly} and obviously with great reluctance, ^{and} why

* in the sense that many earlier inputs had already been heard & digested — and some now discounted. I don't know who.

4. To retrieve a messy political situation. Nixon had been standing for nuclear superiority, and maybe sufficiency. * See 220A

Military inherently suspicious of detail-oriented calculations; to function in assigned tasks, they demand the means to control a situation.

CONGRESS:

1. What is your view of a congressman's or senator's ability to understand the technical issues involved?
2. Do you think congressmen and senators are able to secure adequate outside expertise?
3. If not, how would you ameliorate this?

1. Variable and idiosyncratic.

2. Easily, and many will properly trust the judgment of one of their informed colleagues.

3. More funds for Congressional staff.

see 225(A)

1. Can a scientist give impartial advice on a question like ABM?
2. Should he, or should he assume an advocacy position and enlist others to his cause? How will he be more effective?
3. With how many decisions of a govt should a man disagree before he decides he must resign from his advisory position in order to maintain his integrity?
4. Can you give an example of where you think it would have been effective in the ABM case if a scientist had resigned?

1. Why not?

2. That's a fair question. Indisputable. But he should make it plain whether he is professing to give equal and full weight to all the evidence (scientific/judicial/etc) and where he is advocating a position for reasons outside the scope of his special expertise.

3. Again, an individual matter. In arenas (like defense policy) a man may stay on just because of his deep concern that some good advice still get through: an adversor does not have to protest his name. (He can sometimes swallow indignity in silence.)

4. I don't know any one who would have wanted to and would also have influenced the decision appreciably by resigning. Taylor was in no ignorance of the conventional scientific position as ABM Public. Expression was unmistakably given. E.C. Ransby v. Packard, Jr.

CONFLICT BETWEEN SCIENTIFIC ETHOS AND POLITICS

1. Do you perceive any conflict or tension between your professional role as a scientist and your role as a partisan in a highly politicized issue?

2. Would you say you used the same orientation or approach to the ABM problem as you do in your own research: in terms of objectivity, looking at the whole problem, stating your assumptions explicitly, etc?

3. How about other scientists in the debate? First those on the same side as you.

4. How about those on the other side?

1. I don't think I was all that partisan in my own role. My first introduction to the subject was mainly to ask that it be properly ventilated.

There is a potential conflict, on which I touched @ p. 19

2. Even so, no. I am not sure that is even possible, and with all the cautions stated p. 19. I would still not pretend to comparable objectivity. I would say first off that I do not feel I have that much knowledge or expertise; but then who does and is equally capable of non-prejudicial judgment?
3. I was anti-ABM; ~~my~~ most of my colleagues on this side knew much less, and were less ready to deal 'objectively' with the problem. I think their reactions were mobilized by some crowd-fever and by a generalized anti-administration and anti-DOD stance. Much the same thong has happened in the CBW debates-- coming to essentially the right conclusions for the wrong reasons.
4. I do not identify many scientists on the pro-ABM side. Perhaps because they were so isolated, I have the impression that many of their remarks were more cautious.

But after all, ABM was and is not primarily a scientific issue. Any more than fall-out ~~shelters~~ shelters. (See, again, 220A)

NORMATIVE VIEW: WHAT IS THE PROPER ROLE OF SCIENTISTS IN
POLITICS

Wood: "Scientists are an apolitical elite, triumphing in the political arena to the extent to which they disavow political objectives and refuse to behave according to conventional political practice."

vs

Sayre: "Scientists can't stand aloof from the political arena but are inescapably committed to politics if they hope to exercise influence in the shaping of public policy, including science policies."

1. Should scientists organize for political action?
2. If yes, what forms of organization are best?
 - a Partisan politics such as Scientists and Engineers for..
 - b Council for Livable World seminars?
 - c Picketing, marching, demonstrating?
3. Have you been involved in any such activities?
4. How effective do you think each of them is?

1-2. Scientists would so the best service by working to maintain open analysis and discussion of technical problems. I think Wood is closer to real life.

2b.

3-4 Limited. My main channels are 1) public writing; 2) consultation with govt agencies and congressional staff; occasional testimony.

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EVALUATIVE VIEW:

1. How effective are scientists in political arena?
2. What skills do they bring into political arena?
3. How effective do you think scientists were overall in ABM debate?
4. How would outcome have been different if hadn't had massive effort?
5. Which scientists do you think were most effective in influencing Congress, the public or the decision makers?
6. To what do you attribute their success?

1. Not very
2. Specific knowledge and prestige in appropriate areas. We know less than we pretend about the realities of non-laboratory milieu.
3. They did succeed in opening up a lot of issues that then became more 'popular'. Some of them were as phony as skin cancer or radiation hazard from the SST. But they show the administration had not done all of its homework. Bombs in your backyard?
4. Fewer Senators would have mobilized, or felt the effort was worthwhile if they had not been strongly urged.
5. I think the Panofsky-Packard debate must have been very damaging to the credibility of the DOD. "A scientist I met at the airport!
6. Rigor. Straightforwardness. Clarity of thinking, and of articulate expression.

VIEWS ON NATIONAL SECURITY:

1. What means do you see for achieving security?
- ~~2. What weapons should be developed?~~
- ~~3. What weapons should not be developed?~~
4. View of SALT talks?
5. How do you view the military establishment in this country?

1. Atlantic Alliance; economic and political unification ; systematic programs of world development.

B

4. See 220. Maybe start of longlasting better dialogue with USSR over mutual problems. ¶¶¶

5. It has enormous job to do; under systematic direction like McNamara's, it can do it rather well. Side effects, of inappropriate degree of political and economic influence that are difficult to separate from the scale of its task, need to be watched more carefully. Will take a shrewd and courageous President and OSD. Laird may be doing moderately well, but the task of 'keeping DOD honest' is an enormous one. The recent Enthoven-Smith book paints a convincing picture.

Military people should have broader career options, e.g. to branch into foreign service, arms control, AID work etc., so they are not personally locked into a rigid narrow stance of how to solve the country's problems. Conversely a good combat soldier does not necessarily mature into the shrewdest strategist.

DOD cannot be held responsible if the President accepts only its advice, knowing the inherent bias in the source. But DOD must be more actively barred from influence in other arenas -- ~~support of academic research~~; regional employment patterns; foreign policy.

Yarmolinsky's book covers this very well.

DOD should not be the prime funder in areas like engineering research. It needs significant contact with the academic community, but the latter must have other recourse to keep its independence.

1. How do you regard Russia?
2. How would you assess the probability that we and the Soviet Union will engage in a massive engagement within the next 5-10 years?
3. How much contact have you had with Russian scientists? HAVE YOU BEEN TO RUSSIA?
4. How do you regard China?
5. How would you assess the probability that we and the Chinese will engage in a massive engagement within the next 5-10 years?
6. Have you participated in any Pugwash Conferences?

1. Captured by a dictatorship, in a historical tragedy.
2. $p = 0.1$ a gravely high number. If we do not repair our domestic divisions, we may (mis?)lead the hardliners in the USSR to try for very risky adventures in the belief that we are incapable of responding. (E.G. a Cubanization of Latin America).
3. Discussions at meetings in US and Europe. Vists to my lab.
I have nver visited USSR
4. "Waking Giant". Confused in national ideology. (Communism may be a passing phase in its national development;)/ i.e. nationalism runs deeper than political theory.
5. Would require a major stupidity. $p = .05$.
6. No. (Hard luck in following through several invitations that I had intended to accept.)

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1. Do you feel one's institutional position, whether one is in academia, industry or government colors one's political perceptions?
2. If yes, how?
3. If not, why not?

1. Personal success invidiously sustains faith in the status quo.
"Outspoken liberals" would be intemperate radicals if they lacked personal anchors.

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THE LAST FEW QUESTIONS ARE A BIT MORE PERSONAL...

1. Who was your thesis advisor? Where? When?
2. Were you politically active while a student?
3. Did you discuss politics or the science-politics interface with your professor?
4. Are you still in close touch with your professor?
5. Do you feel he had any influence upon your political views or attitudes?

1. E L Tatum Yale Univ 1946-7.

2 No

3 Casually

4 Moderately

5 No -- excepty he was a model of a temperate man.

ROLE MODEL (B)

1. Which of your own students are active politically?
2. Do you discuss politics or science politics with them?
3. Do you keep in close touch with your former students?
4. Do you feel you influenced any of their political views or attitudes?

mirror image of p. 27

2.. In keeping with times, much more than I did.

1. Have you ever worked on weapons development?
2. What defense related work have you been connected with?
3. Is any of your research defense sponsored?
4. Is any of your research government sponsored?
5. Has the pattern changed over the last 5 years?
6. What percentage of your time is spent advising the government?

1. No 2. None very directly. 3 Yes: ARPA funds a computer-intelligence project that we would have trouble finding alternative support for, though NIH and NSF are beginning to come through. No trace of political interference from DOD; the project has no short-term military utility. (May be an input to strategic command and control systems at some point).

4. All with rare exceptions (mostly NIH)

5. Some bits and pieces from USAF cut off. NASA support severely cut back. Plateauing (and inflationary erosion) of NIH/NSF.

6 10.

NAME:

DATE OF INTERVIEW: MAY 11 1971

PLACE:

LENGTH:

USE OF ~~NAME~~ OR ANONYMITY?

WHAT OTHER PEOPLE DO YOU SUGGEST I INTERVIEW?

MAY I USE YOUR NAME WHEN I CONTACT HIM?

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